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- EFS-Bio (<<u>http://www.uspto.gov/ebc/efs/downloads/documents.htm</u>>, EFS Submission User Manual - ePAVE)
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Revised 05/17/04



PCT



to See. Destruction description

RAW SEQUENCE LISTING DATE: 09/17/2004 PATENT APPLICATION: US/10/507,237 TIME: 12:20:48 Input Set : A:\21051yp.txt Output Set: N:\CRF4\09172004\J507237.raw 4 <110> APPLICANT: Emini, Emilio A. Shiver, John W. 5 Casimiro, Danilo R. 6 Bett, Andrew J. 7 Liang, Xiaoping 8 9 Fu, Tong-Ming 11 <120> TITLE OF INVENTION: METHOD OF INDUCING AN ENHANCED IMMUNE RESPONSE AGAINST HIV 12 14 <130> FILE REFERENCE: 21051YP C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/507,237 C--> 16 <141> CURRENT FILING DATE: 2004-09-09 16 <150> PRIOR APPLICATION NUMBER: PCT/US03/07727 17 <151> PRIOR FILING DATE: 2003-03-12 19 <150> PRIOR APPLICATION NUMBER: 60/363,807 20 <151> PRIOR FILING DATE: 2002-03-13 ġ **Does** Not Comply 22 <160> NUMBER OF SEQ ID NOS: 5 24 <170> SOFTWARE: FastSEQ for Windows Version 4.0 Corrected Diskette Needed

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DATE: 09/17/2004 TIME: 12:20:48

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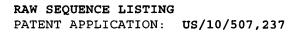
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1562 acaggaggac tacaccaact ttgtgagcgc actgcggcta atggtgactg agacaccgca 12840 1563 aaqtqaqqtg tatcagtccg ggccagacta ttttttccaq accagtagac aaggcctgca 12900 1564 gaccgtaaac ctgagccagg ctttcaagaa cttgcagggg ctgtgggggg tgcgggctcc 12960 1565 cacaggegac egegegaceg tgtetagett getgaegeee aactegegee tgttgetget 13020 1566 getaatageg eeetteaegg acagtggeag egtgteeegg gacacataee taggteaett 13080 1567 getgacaetg tacegegagg ceataggtea ggegeatgtg gaegageata ettteeagga 13140 1568 gattacaagt gttagccgcg cgctggggca ggaggacacg ggcagcctgg aggcaaccct 13200 1569 gaactacetg etgaceaace ggeggeaaaa aateeeeteg ttgeacagtt taaacagega 13260 1570 qqaqqaqcqc attttqcqct atqtqcaqca qaqcqtqaqc cttaacctga tgcgcgacgg 13320 1571 ggtaacgccc agcgtggcgc tggacatgac cgcgcgcaac atggaaccgg gcatgtatgc 13380 1572 ctcaaaccgg ccgtttatca atcgcctaat ggactacttg catcgcgcgg ccgccgtgaa 13440 1573 ccccgagtat ttcaccaatg ccatcttgaa cccgcactgg ctaccgcccc ctggtttcta 13500 1574 caccgggggga ttcgaggtgc ccgagggtaa cgatggattc ctctgggacg acatagacga 13560 1575 cagcgtgttt tcccccgcaac cgcagaccct gctagagttg caacaacgcg agcaggcaga 13620 1576 ggcggcgctg cgaaaggaaa gcttccgcag gccaagcagc ttgtccgatc taggcgctgc 13680 1577 ggccccgcgg tcagatgcta gtagcccatt tccaagcttg atagggtctc ttaccagcac 13740 1578 tegcaccace egecegegee tgetgggega ggaggagtae etaaacaaet egetgetgea 13800 1579 geogeagege gaaaagaace tgeeteegge gttteeeaac aaegggatag agageetagt 13860 1580 ggacaagatg agtagatgga agacgtatgc gcaggagcac agggatgtgc ccggcccgcg 13920 1581 cccgcccacc cgtcgtcaaa ggcacgaccg tcagcggggt ctggtgtggg aggacgatga 13980 1582 ctcggcagac gacagcagcg tcttggattt gggagggagt ggcaacccgt ttgcacacct 14040 1583 tcgccccagg ctggggagaa tgttttaaaa aaagcatgat gcaaaataaa aaactcacca 14100 1584 aggccatggc accgagcgtt ggttttcttg tattcccctt agtatgcggc gcgcggcgat 14160 1585 gtatgaggaa ggtcctcctc cctcctacga gagcgtggtg agcgcggcgc cagtggcggc 14220 1586 ggcgctgggt tcacccttcg atgctcccct ggacccgccg ttcgtgcctc cgcggtacct 14280 1587 geggeetace ggggggagaa acageateeg ttactetgag ttggcaceee tattegacae 14340 1588 caccegtgtg tacettgtgg acaacaagte aaeggatgtg geateeetga actaecagaa 14400 1589 cgaccacagc aactttetaa ccacqgteat teaaaacaat gactacagee eggggggggg 14460 1590 aagcacacag accatcaatc ttgacgaccg gtcgcactgg ggcggcgacc tgaaaaccat 14520 1591 cctgcatacc aacatgccaa atgtgaacga gttcatgttt accaataagt ttaaggcgcg 14580 1592 ggtgatggtg tcgcgctcgc ttactaagga caaacaggtg gagctgaaat acgagtgggt 14640 1593 ggagttcacg ctgcccgagg gcaactactc cgagaccatg accatagacc ttatgaacaa 14700 1594 cgcgatcgtg gagcactact tgaaagtggg caggcagaac ggggttctgg aaagcgacat 14760 1595 cggggtaaag tttgacaccc gcaacttcag actggggttt gacccagtca ctggtcttgt 14820 1596 catgcctggg gtatatacaa acgaagcett ceatecagae ateattttge tgecaggatg 14880 1597 cggggtggac ttcacccaca gccgcctgag caacttgttg ggcatccgca agcggcaacc 14940 1598 cttccaggag ggctttagga tcacctacga tgacctggag ggtggtaaca ttcccgcact 15000 1599 gttggatgtg gacgcctacc aggcaagctt gaaagatgac accgaacagg gcgggggtgg 15060 1600 cgcaggcggc ggcaacaaca gtggcagcgg cgcggaagag aactccaacg cggcagctgc 15120 1601 qqcaatqcaq ccqqtqgaqq acatqaacqa tcatqccatt cqcqqcqaca cctttqccac 15180 1602 acgggcggag gagaagcgcg ctgaggccga ggcagcggcc gaagctgccg cccccgctgc 15240 1603 ggaggetgea caaceegagg tegagaagee teagaagaaa eeggtgatta aaceeetgae 15300 1604 agaggacagc aagaaacgca gttacaacct aataagcaat gacagcacct tcacccagta 15360 1605 ccgcagctgg taccttgcat acaactacgg cgaccctcag gccgggatcc gctcatggac 15420 1606 cctgctttgc actcctgacg taacctgcgg ctcggagcag gtatactggt cgttgcccga 15480 1607 catgatgcaa gaccccgtga cettecgete cacgegeeag atcageaact ttecggtggt 15540 1608 gggcgccgag ctgttgcccg tgcactccaa gagcttctac aacgaccagg ccgtctactc 15600 1609 ccageteate egecagttta cetetetgae ecaegtgtte aategettte eegagaacea 15660 1610 gattttggcg cgcccgccag cccccaccat caccaccgtc agtgaaaacg ttcctgctct 15720

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1611 cacagatcac gggacgctac cgctgcgcaa cagcatcgga ggagtccagc gagtgaccat 15780 1612 tactgacgec agacgeegea cetgeeceta egtttacaag geeetgggea tagtetegee 15840 1613 gegegteeta tegageegea etttttgage aageatgtee ateettatat egeeeageaa 15900 1614 taacacaggc tgggggcctgc gcttcccaag caagatgttt ggcggggcca agaagcgctc 15960 1615 cgaccaacac ccagtgcgcg tgcgcgggca ctaccgcgcg ccctggggcg cgcacaaacg 16020 1616 cggccgcact gggcgcacca ccgtcgatga cgccatcgac gcggtggtgg aggaggcgcg 16080 1617 caactacacg cccacgccgc cgccagtgtc caccgtggac gcggccattc agaccgtggt 16140 1618 gcgcggagcc cggcgctacg ctaaaatgaa gagacggcgg aggcgcgtag cacgtcgcca 16200 1619 ccgccqccqa cccggcactg ccgcccaacg cgcggcggcg gccctgctta accgcgcacg 16260 1620 tcgcaccggc cgacgggcgg ccatgcgagc cgctcgaagg ctggccgcgg gtattgtcac 16320 1621 tgtgcccccc aggtccaggc gacgagcggc cgccgcagca gccgcggcca ttagtgctat 16380 1622 gactcagggt cgcaggggca acgtgtactg ggtgcgcgac tcggttagcg gcctgcgcgt 16440 1623 geccgtgege accegecece egegeaacta gattgeaata aaaaactaet tagaetegta 16500 1624 ctgttgtatg tatccagcgg cggcggcgcg catcgaagct atgtccaagc gcaaaatcaa 16560 1625 agaagagatg ctccaggtca tcgcgccgga gatctatggc cccccgaaga aggaagagca 16620 1626 ggattacaag ccccgaaagc taaagcgggt caaaaagaaa aagaaagatg atgatgatga 16680 1627 tgaacttgac gacgaggtgg aactgttgca cgcgaccgcg cccaggcgac gggtacagtg 16740 1628 gaaaggtega egegtaagae gtgttttgeg acceggeace accgtagtet ttaegeeegg 16800 1629 tgagcgctcc acccgcacct acaagcgcgt gtatgatgag gtgtacggcg acgaggacct 16860 1630 gettgageag gecaacgage geetegggga gtttgeetae ggaaagegge ataaggaeat 16920 1631 gctggcgttg ccgctggacg agggcaaccc aacacctagc ctaaagcccg tgacactgca 16980 1632 gcaggtgctg cccgcgcttg caccgtccga agaaaagcgc ggcctaaagc gcgagtctgg 17040 1633 tgacttggca cccaccgtgc agctgatggt acccaagcgt cagcgactgg aagatgtctt 17100 1634 ggaaaaaatg accgtggagc ctgggctgga gcccgaggtc cgcgtgcggc caatcaagca 17160 1635 ggtggcaccg ggactgggcg tgcagaccgt ggacgttcag atacccacca ccagtagcac 17220 1636 tagtattgcc actgccacag agggcatgga gacacaaacg tccccggttg cctcggcggt 17280 1637 ggcagatgcc gcggtgcagg cggccgctgc ggccgcgtcc aagacctcta cggaggtgca 17340 1638 aacggacccg tggatgtttc gtgtttcagc cccccggcgt ccgcgccgtt caaggaagta 17400 1639 cggcgccgcc agcgcgctac tgcccgaata tgccctacat ccttccatcg cgcctacccc 17460 1640 cggctatcgt ggctacacct accgccccag aagacgagca actacccgac gccgaaccac 17520 1641 cactggaacc cgccgccgcc gtcgccgtcg ccagcccgtg ctggccccga tttccgtgcg 17580 1642 cagggtggct cgcgaaggag gcaggaccct ggtgctgcca acagcgcgct accaccccag 17640 1643 catcgtttaa aageeggtet ttgtggttet tgeagatatg geeeteacet geegeeteeg 17700 1644 tttcccggtg ccgggattcc gaggaagaat gcaccgtagg aggggcatgg ccggccacgg 17760 1645 cetgaeggge ggeatgegte gtgegeacea eeggeggegg egegegtege acegtegeat 17820 1646 gegeggeggt atcetgecee teettattee actgategee geggegattg gegeegtgee 17880 1647 cggaattgca tccgtggcct tgcaggcgca gagacactga ttaaaaacaa gttacatgtg 17940 1648 gaaaaatcaa aataaaagtc tggactctca cgctcgcttg gtcctgtaac tattttgtag 18000 1649 aatggaagac atcaactttg cgtcactggc cccgcgacac ggctcgcgcc cgttcatggg 18060 1650 aaactqqcaa qatatcqqca ccaqcaatat qagcqgtggc gccttcagct ggggctcgct 18120 1651 gtggagcggc attaaaaatt tcggttccgc cgttaagaac tatggcagca aagcctggaa 18180 1652 caqcaqcaca qqccaqatqc tqaqqqacaa qttqaaaqaq caaaatttcc aacaaaaggt 18240 1653 ggtagatggc ctggcctctg gcattagcgg ggtggtggac ctggccaacc aggcagtgca 18300 1654 aaataagatt aacagtaagc ttgatccccg ccctcccgta gaggagcctc caccggccgt 18360 1655 ggagacagtg tetecagagg ggegtggega aaagegteeg egaecegaea gggaagaaae 18420 1656 tetggtgacg caaatagacg agecteette gtacgaggag geactaaage aaggeetgee 18480 1657 caccaccegt cccategege ccatggetac eggagtgetg ggeeageaca caccegtaac 18540 1658 gctggacctg cctccccccg ccgacaccca gcagaaacct gtgctgccag gcccgtccgc 18600 1659 cqttqttqta acccqtccta qccgcgcgtc cctgcgccgc gccgccagcg gtccgcgatc 18660



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1660 gttgcggccc gtagccagtg gcaactggca aagcacactg aacagcatcg tgggtttggg 18720 1661 gqtqcaatcc ctgaaqcqcc qacgatgctt ctgataqcta acqtgtcgta tgtgtgtcat 18780 1662 gtatgcgtcc atgtcgccgc cagaggagct gctgagccgc cgcgcgcccg ctttccaaga 18840 1663 tggctacccc ttcgatgatg ccgcagtggt cttacatgca catctcgggc caggacgcct 18900 1664 cggagtacct gagccccggg ctggtgcagt tcgcccgcgc caccgagacg tacttcagcc 18960 1665 tgaataacaa gtttagaaac cccacggtgg cgcctacgca cgacgtgacc acagaccggt 19020 1666 ctcagcgttt gacgetgegg ttcateceeg tggacegega ggataetgeg tactegtaca 19080 1667 aggcgcggtt caccctagct gtgggtgata accgtgtgct agacatggct tccacgtact 19140 1668 ttgacateeg eggegtgetg gacaggggee etaettttaa geeetaetet ggeaetgeet 19200 1669 acaacgcact ggcccccaag ggtgccccca actcgtgcga gtgggaacaa aatgaaactg 19260 1670 cacaagtgga tgctcaagaa cttgacgaag aggagaatga agccaatgaa gctcaggcgc 19320 1671 gagaacagga acaagctaag aaaacccatg tatatgccca ggctccactg tccggaataa 19380 1672 aaataactaa agaaggtcta caaataggaa ctgccgacgc cacagtagca ggtgccggca 19440 1673 aagaaatttt cgcagacaaa acttttcaac ctgaaccaca agtaggagaa tctcaatgga 19500 1674 acgaagcgga tgccacagca gctggtggaa gggttcttaa aaagacaact cccatgaaac 19560 1675 cetgetatgg etcatacget agacecacea attecaaegg eggaeaggge gttatggttg 19620 1676 aacaaaatgg taaattggaa agtcaagtcg aaatgcaatt tttttccaca tccacaaatg 19680 1677 ccacaaatga agttaacaat atacaaccaa cagttgtatt gtacagcgaa gatgtaaaca 19740 1678 tggaaactcc agatactcat ctttcttata aacctaaaat gggggataaa aatgccaaag 19800 1679 tcatgcttgg acaacaagca atgccaaaca gaccaaatta cattgctttt agagacaatt 19860 1680 ttattggtct catgtattac aacagcacag gtaacatggg tgtccttgct ggtcaggcat 19920 1681 cgcagttgaa cgctgttgta gatttgcaag acagaaacac agagctgtcc taccagcttt 19980 1682 tgcttgattc aattggcgac agaacaagat acttttcaat gtggaatcaa gctgttgaca 20040 1683 getatgatee agatgteaga attattgaga accatggaae tgaggatgag ttgeeaaatt 20100 1684 attgctttcc tcttggtgga attgggatta ctgacacttt tcaagctgtt aaaacaactg 20160 1685 ctgctaacgg ggaccaaggc aatactacct ggcaaaaaga ttcaacattt gcagaacgca 20220 1686 atgaaatagg ggtgggaaat aactttgcca tggaaattaa cctgaatgcc aacctatgga 20280 1687 gaaattteet ttaeteeaat attgegetgt acetgeeaga caagetaaaa taeaaeeeca 20340 1688 ccaatgtgga aatatctgac aaccccaaca cctacgacta catgaacaag cgagtggtgg 20400 1689 ctcctgggct tgtagactgc tacattaacc ttggggcgcg ctggtctctg gactacatgg 20460 1690 acaacgttaa teeetttaae caecaeegea atgegggeet gegttaeege teeatgttgt 20520 1691 tgggaaacgg ccgctacgtg ccctttcaca ttcaggtgcc ccaaaagttt tttgccatta 20580 1692 aaaacctcct cctcctgcca ggctcataca catatgaatg gaacttcagg aaggatgtta 20640 1693 acatggttct gcagagctct ctgggaaacg accttagagt tgacggggct agcattaagt 20700 1694 ttgacageat ttgtetttac gecaeettet teeceatgge ceaeaacaeg geeteeacge 20760 1695 tggaagccat gctcagaaat gacaccaacg accagtcctt taatgactac ctttccgccg 20820 1696 ccaacatget atateceata ecegeeaacg ceaceaacgt geceatetee ateceatege 20880 1697 gcaactgggc agcatttcgc ggttgggcct tcacacgctt gaagacaaag gaaacccctt 20940 1698 ccctgggatc aggctacgac ccttactaca cctactctgg ctccatacca taccttgacg 21000 1699 gaaccttcta tcttaatcac acctttaaga aggtggccat tacttttgac tcttctgtta 21060 1700 getggeeggg caacgaeege etgettaete eeaatgagtt tgagattaag egeteagttg 21120 1701 acqqqqaqqq ctataacqta qctcaqtgca acatqacaaa qqactqqttc ctaqtgcaga 21180 1702 tgttggccaa ctacaatatt ggctaccagg gcttctacat tccagaaagc tacaaagacc 21240 1703 gcatgtactc gttcttcaga aacttccagc ccatgagccg gcaagtggtg gacgatacta 21300 1704 aatacaaaga ttatcagcag gttggaatta tccaccagca taacaactca ggcttcgtag 21360 1705 getacetege teccaecatg egegagggae aagettaeee egetaatgtt eectaeceae 21420 1706 taataggcaa aaccgcggtt gatagtatta cccagaaaaa gtttctttgc gaccgcaccc 21480 1707 tgtggcgcat ccccttctcc agtaacttta tgtccatggg tgcgctcaca gacctgggcc 21540 1708 aaaaccttct ctacgcaaac tccgcccacg cgctagacat gacctttgag gtggatccca 21600

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Input Set : A:\21051yp.txt
Output Set: N:\CRF4\09172004\J507237.raw

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Input Set : A:\21051yp.txt
Output Set: N:\CRF4\09172004\J507237.raw

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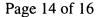


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Input Set : A:\21051yp.txt
Output Set: N:\CRF4\09172004\J507237.raw

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file://C:\CRF4\Outhold\VsrJ507237.htm



VARIABLE LOCATION SUMMARY PATENT APPLICATION: US/10/507,237

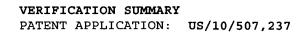
DATE: 09/17/2004 TIME: 12:20:49

MA Huerothen Output Set: N:\CRF4\09172004\J507237.raw

Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing. Use of <220> to <223> is MANDATORY if n's or Xaa's are present. in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:5; N Pos. 34984



• *

DATE: 09/17/2004 TIME: 12:20:49

Input Set : A:\21051yp.txt
Output Set: N:\CRF4\09172004\J507237.raw

L:16 M:270 C: Current Application Number differs, Replaced Current Application No L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:1932 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:5